

REMARKS

This is intended as a full and complete response to the Final Office Action dated June 27, 2003, having a shortened statutory period for response set to expire on September 27, 2003. Please reconsider the claims pending in the application for reasons discussed below.

Claim 120 is objected to. Applicants have canceled claims 120, 122, and 123. Applicants submit that the changes made herein reduce the issues for appeal.

Claims 100-101, 103-104, 106-111, 115-116, and 120-123 are rejected under 35 U.S.C. § 102(b) as being anticipated by *Wang, et al.* (U.S. Patent No. 5,000,113). The Examiner states that *Wang, et al.* shows an electrode plate having a first member 104 and a second member 105, the first member having an upper surface connected to a support frame 80.

Applicants respectfully submit that while *Wang, et al.* shows a ring flow turner 104 that contacts a cover 80, *Wang, et al.* does not show or teach that ring flow turner 104 is coupled to cover 80. *Wang, et al.* only describes ring flow turner 104 as being mounted in plate rim 105 (column 12, lines 64-65). At best, *Wang, et al.* suggests that plate rim 105 is coupled to cover 80, as it appears in Figure 10 that there is a O-ring between plate rim 105 and cover 80. Ring flow turner 104 is described as being mounted in plate rim 105. Thus, there is no motivation or suggestion to also couple ring flow turner 104 to cover 80.

Furthermore, Applicants submit that *Wang, et al.* does not teach or suggest one or more feedthroughs fluidly connected to at least one temperature control channel formed by the first and second members of an electrode plate. The Examiner asserts that feedthroughs 98/100/102 are fluidly connected to one or more channels. Applicants submit that *Wang, et al.* only shows and describes 98, 100, and 102 as holes connected to channels (inlet bore 98, groove 100, annular groove 102) for purge gas (column 12, lines 56-68, Fig. 10). *Wang, et al.* does not show or describe a feedthrough as described and shown in the instant application. Figure 8 of the instant application shows an example of a feedthrough, e.g., feedthrough 54 disposed in a feedthrough channel 57.

In view of the above, Applicants submit that *Wang, et al.* does not teach, show, or suggest a processing chamber, comprising a chamber body, a substrate support member disposed in the chamber body, wherein the substrate support member comprises a first electrode, an electrode plate comprising a first member coupled to a second member, wherein a surface of the second member is disposed at least partially in an interior portion of the chamber body in opposition to the first electrode, and wherein the first member and the second member form at least one temperature control channel, a support frame coupled to the first member, and one or more feedthroughs fluidly connected to the at least one temperature control channel, as recited in claim 100. Applicants respectfully request withdrawal of the rejection of claim 100 and of claims 101, 103-104, and 106-108, which depend thereon.

Applicants propose amending claims 109 and 110 to more clearly recite the claimed subject matter. As amended, claims 109 and 110 include a backing plate coupled to the electrode plate via a feedthrough that is connected to the at least one temperature control channel. Applicants submit that the changes made herein do not introduce new matter and do not present new issues, as a feedthrough connected to a temperature control channel is recited in currently pending claims 100 and 121.

Regarding proposed claims 109 and 110, Applicants submit that *Wang, et al.* does not teach or suggest a backing plate coupled to the electrode plate via a feedthrough that is connected to the at least one temperature control channel. As discussed above, at best, Figure 10 of *Wang, et al.* suggests coupling cover 80 to manifold plate rim 105 via an O-ring. There is no suggestion or motivation to couple a backing plate to the electrode plate using a device such as a feedthrough that also is connected to the channel 106. There is no suggestion in *Wang, et al.* as to how a feedthrough connected to channel 106 could couple the electrode plate and the cover.

In view of the above, Applicants submit that *Wang, et al.* does not teach, show, or suggest a processing chamber for processing a substrate, the processing chamber comprising a chamber body, a substrate support member disposed within the chamber body, an electrode plate disposed at least partially in an interior portion of the chamber body in opposition to the substrate support member, wherein the electrode plate forms at least one temperature control channel, and a backing plate coupled to the electrode

plate via a feedthrough that is connected to the at least one temperature control channel, as recited in proposed claim 109. Applicants respectfully request withdrawal of the rejection of claim 109.

Applicants further submit that *Wang, et al.* does not teach, show, or suggest a processing chamber for processing a substrate, the processing chamber comprising a chamber body, a substrate support member disposed within the chamber body, an electrode plate comprising a first member coupled to a second member, wherein the first member and the second member form at least one temperature control channel disposed at least partially between the first member and the second member, and wherein the second member comprises an electrode and the at least one temperature control channel is distributed across a substantial portion of the electrode plate, and a backing plate coupled to the electrode plate via a feedthrough that is connected to the at least one temperature control channel, as recited in proposed claim 110. Applicants respectfully request withdrawal of the rejection of claim 110 and of claims 111 and 115-116, which depend thereon.

Regarding claim 121, the Examiner states that *Wang, et al.* shows a retaining ring 125 coupled to the chamber body, wherein the retaining ring has a feedthrough hole formed therein, and a feedthrough 106 disposed in a feedthrough hole. Applicants submit that *Wang, et al.* does not show a retaining ring having a feedthrough hole. Reference number 125 of *Wang, et al.* is not described in the specification and appears to be pointing to the same feature as reference numeral 105, which is described as the manifold plate rim, and is asserted by the Examiner to be a second member of the electrode plate 32. Furthermore, *Wang, et al.* does not describe a feedthrough disposed in a feedthrough hole connected to a temperature control channel. While *Wang, et al.* shows a channel 106, *Wang, et al.* does not show or suggest a feedthrough in the channel 106. As claim 121 requires a retaining ring having a feedthrough hole formed therein and a feedthrough disposed in a feedthrough hole and fluidly connected to a temperature control channel, *Wang, et al.* does not provide all of the limitations of claim 121.

In view of the above, *Wang, et al.* does not teach, show, or suggest a processing chamber comprising a chamber body, a substrate support member disposed within the

chamber body, a retaining ring coupled to the chamber body, wherein the retaining ring has a feedthrough hole formed therein, a chamber lid coupled to the retaining ring, wherein the chamber lid forms a fluid inlet, a fluid outlet, and a temperature control channel, and wherein the temperature control channel is fluidly connected to the fluid inlet and fluid outlet, and a feedthrough disposed in a feedthrough hole, wherein the feedthrough is fluidly connected to the temperature control channel, and wherein the feedthrough attaches the chamber lid to the retaining ring, as recited in claim 121. Applicants respectfully request withdrawal of the rejection of claim 121.

Claims 81-92, 120-121, and 123 are rejected under 35 U.S.C. § 102(e) as being anticipated by *Crawley, et al.* (U.S. Patent No. 5,871,586). The Examiner states that *Crawley, et al.* describes a chamber lid assembly 7 connected to the retaining ring 8 by one or more feedthroughs (Figure 2).

Applicants submit that *Crawley, et al.* does not show or describe connecting injector assembly 8 to lid 7 by one or more feedthroughs. *Crawley, et al.* shows a gallery 28 in the injector assembly 8. As the gallery 28 is within the injector assembly 8, it cannot connect the injector assembly to the lid 7. Instead, *Crawley, et al.* states that an O-ring seal is provided between lid 7 and the injector assembly 8 (column 4, lines 13-15). Applicants submit that *Crawley, et al.* does not teach, show, or suggest a processing chamber, comprising a chamber body, a substrate support member disposed within the chamber body, a retaining ring having one or more feedthrough holes formed therein, one or more feedthroughs disposed in the one or more feedthrough holes, a chamber lid connected to the retaining ring by the one or more feedthroughs, the chamber lid comprising a first plate coupled to a second plate, wherein the first plate and the second plate form a temperature control channel, and a fluid inlet and a fluid outlet formed in the chamber lid, wherein the fluid inlet and the fluid outlet are fluidly coupled to the one or more feedthroughs, as recited in claim 81. Applicants respectfully request withdrawal of the rejection of claim 81 and of claims 82-92, which depend thereon.

Crawley, et al. does not show or describe a chamber lid attached to the retaining ring by a feedthrough in the retaining ring, as described in claim 121. Applicants submit that *Crawley, et al.* does not teach, show, or suggest a processing chamber comprising

a chamber body, a substrate support member disposed within the chamber body, a retaining ring coupled to the chamber body, wherein the retaining ring has a feedthrough hole formed therein, a chamber lid coupled to the retaining ring, wherein the chamber lid forms a fluid inlet, a fluid outlet, and a temperature control channel, and wherein the temperature control channel is fluidly connected to the fluid inlet and fluid outlet, and a feedthrough disposed in a feedthrough hole, wherein the feedthrough is fluidly connected to the temperature control channel, and wherein the feedthrough attaches the chamber lid to the retaining ring, as recited in claim 121. Applicants respectfully request withdrawal of the rejection of claim 121.

Claims 112-114 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Wang, et al.* As claims 112-114 include the limitations of claim 110, Applicants submit that claims 112-114 are patentable over *Wang, et al.* for the reasons discussed above with respect to claim 110. Applicants respectfully request withdrawal of the rejection of claims 112-114.

Claims 102, 105, and 117-119 are rejected under U.S.C. § 103(a) as being unpatentable over *Wang, et al.* in view of *Degner, et al.* (U.S. Patent No. 5,074,456). As claims 102 and 105 include the limitations of claim 100, Applicants submit that claims 102 and 105 are patentable over *Wang, et al.* for the reasons discussed above with respect to claim 100. As claims 117-119 include the limitations of claim 110, Applicants submit that claims 117-119 are patentable over *Wang, et al.* for the reasons discussed above with respect to claim 110. Furthermore, *Degner, et al.*, alone or in combination with *Wang, et al.* does not teach or suggest all of the limitations of claims 102, 105, and 117-119. Applicants respectfully request withdrawal of the rejection of claims 102, 105, and 117-119.

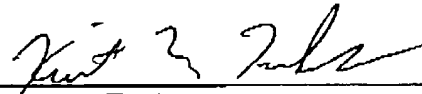
Claims 93-99 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Crawley, et al.* (U.S. Patent No. 5,871,586). As claims 93-99 include the limitations of claim 81, Applicants submit that claims 93-99 are patentable over *Crawley, et al.* for the reasons discussed above with respect to claim 81. Applicants respectfully request withdrawal of the rejection of claims 93-99.

In conclusion, the references cited by the Examiner, neither alone nor in combination, teach, show, or suggest the method or apparatus of the present invention.

Having addressed all issues set out in the office action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

The prior art made of record is noted. However, it is believed that the secondary references are no more pertinent to the Applicants' disclosure than the primary references cited in the office action. Therefore, it is believed that a detailed discussion of the secondary references is not deemed necessary for a full and complete response to this office action. Accordingly, allowance of the claims is respectfully requested.

Respectfully submitted,



Keith M. Tackett
Registration No. 32,008
MOSER, PATTERSON & SHERIDAN, L.L.P.
3040 Post Oak Blvd., Suite 1500
Houston, TX 77056
Telephone: (713) 623-4844
Facsimile: (713) 623-4846
Attorney for Applicant(s)

OFFICIAL

FAX RECEIVED

AUG 27 2003

TC 1700